

What is Claimed is:

1. A method of detecting failures in an implanted analyte-responsive sensor, the method comprising:

implanting an analyte-responsive sensor into a patient, the analyte-responsive sensor comprising N working electrodes, where N is an integer and is two or greater, and a common counter electrode;

5 obtaining a signal generated at one of the N working electrodes and a signal generated at the common counter electrode; and

10 determining failure of the analyte-responsive sensor if the signal from the common counter electrode is not N times the signal from the one of the N working electrodes, within a predetermined threshold limit.